Element Performance Inspection (EPI) Data Collection Tool
1.3.8 Control of Calibrated Tools and Test Equipment (AW)

ELEMENT SUMMARY INFORMATION

Purpose of This Element (Certificate Holder's responsibility):

- To provide an inspection program and a program covering other maintenance, preventive maintenance and alterations that includes procedures, standards, and limits necessary for the periodic inspection and calibration of precision tools, measuring devices and test equipment.

Objective (FAA oversight responsibility):

- To determine if the Certificate Holder follows its procedures, controls, process measurements and interfaces for the Control of Calibrated Tools and Test Equipment program.
- To determine if there were any changes in the personnel identified by the Certificate Holder as having responsibility and/or authority for the Calibrated Tools and Test Equipment program.

Specific Instructions:

- To accomplish this EPI the inspector shall ensure that the Certificate Holder adhered to its policies and procedures for the inspection and calibration of precision tools, measuring devices, and test equipment. The inspector shall conduct spot checks of inspected and calibrated precision tools, measuring devices, and test equipment used in forming the basis for product acceptance or for making an airworthiness determination and review the associated calibration records.

  Airworthiness determinations means performing an approval for return to service or airworthiness release.

  Standard(s) (Calibration standard) encompasses both Measurement standards and Documentary (paper) standards.
  * Measurement standard is an object, artifact, measurement equipment, system or experiment that stores, embodies, otherwise provides a physical quantity, which serves as the basis for measurements of the quantity. A primary, secondary, reference or transfer standard used to inspect or calibrate other measurement devices.
  * Paper standard is a document describing the operations and processes that must be performed in order for a particular end to be achieved, including specific specifications.

  Traceability is a characteristic of a calibration, analogous to a pedigree. A traceable calibration is achieved when each measurement standard, in a hierarchy stretching back directly or indirectly to the National Institute of Standards and Technology (NIST), was itself properly calibrated using the appropriate paper standard, and the results properly

documented.

When answering questions 1.7 and 1.18, this review is looking at the calibration records (test reports, inspection/calibration reports or certificates) generated by the organization that performed the inspection or calibration. Sufficient information means − such as, but not limited to, a traceability statement, measurement standard(s), paper standard(s), environmental condition(s), manufacturer name, part number, serial number, date of inspection/calibration, inspection/calibration details (i.e. organization name, address, report number, who performed and certified the inspection/calibration, limited calibrations, data sheets attached, etc.

When answering questions 1.9 and 1.10, limited calibrations means −
1. When a precision tool, measurement device, or test equipment is not calibrated within its full range (specification). For example, a voltmeter has a full range from 0−20,000 volts and the documented evidence reveals it was calibrated only from 0−500 volt range.

2. When one or more functions of a multifunctional precision tool, measurement device, or test equipment is not calibrated. For example, a multimeter (single device) that can measure volts, amps, ohms, and temperature was calibrated with the exception of the temperature function.

Related EPI(s):

- 1.3.11 Continuous Analysis and Surveillance (CAS) (AW)
- 1.3.3 Maintenance Facility / Main Maintenance Base (AW)
- 5.1.1 Line Stations (AW)

SUPPLEMENTAL INFORMATION

Specific Regulatory Requirement(s) (SRRs):

- SRRs:
  121.135(a)(1)
  121.135(b)(1)
  121.135(b)(2)
  121.135(b)(3)
  121.367
  121.369(b)(5)

Related CFR(s) & FAA Policy/Guidance:

- Related CFRs:
  121.135(b)(16)
  43.13(a)

- FAA Policy/Guidance:
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EPI SECTION 1 − PERFORMANCE OBSERVABLES		
Objective: (FAA oversight responsibility): To determine if the Certificate Holder follows its procedures, controls, process measures and interfaces for the Control of Calibrated Tools and Test Equipment.		
Tasks		
	To meet this objective, the inspector must accomplish the following tasks:	
1	Review information listed in the Supplemental Information section of this data collection tool.	
2	Review the policies, procedures, instructions and information for the Control of Calibrated Tools and Test Equipment program contained in the Certificate Holder's manual.	
3	Review the associated SAI for this element with emphasis on the controls, process measurements and interface attribute sections.	
4	Observe the Control of Calibrated Tools and Test Equipment program to gain an understanding of the procedures, instructions and information contained in the Certificate Holder's manual.	
5	Discuss the Control of Calibrated Tools and Test Equipment program with the personnel (other than management) who perform the duties and responsibilities required by the program.	
Questions		
	To meet this objective, the inspector must answer the following questions:	
1.	Were the following Performance Measures met:	
1.1	Were users of precision tools, measuring devices, or test equipment able to determine the current inspection or calibration status prior to their use? *Related Performance JTI's:* 1. Check at the Ramp if the indication i.e. "sticker", of calibration of precision tools is kept with or on the tool, in accordance with the air carrier's procedures. *Sources:* 121.369(b)(5) 2. Check at the Aircraft that the indication i.e. "sticker", of calibration of precision tools is kept with or on the tool, in accordance with the air carrier's procedures. *Sources:* 121.369(b)(5) 3. Check at the Ramp if the indication i.e. "sticker", of calibration of measuring devises is kept with or on the tool, in accordance with the air carrier's procedures. *Sources:* 121.369(b)(5) 4. Check at the Aircraft that the indication i.e. "sticker", of calibration of measuring devises is kept with or on the tool, in accordance with the air carrier's procedures. *Sources:* 121.369(b)(5) 5. Check at the Ramp if the indication i.e. "sticker", of calibration of test equipment is kept with or on the tool, in accordance with the air carrier's procedures. *Sources:* 121.369(b)(5) 6. Check at the Aircraft that the indication i.e. "sticker", of calibration of test equipment is kept with or on the tool, in accordance with the air carrier's procedures.	☐ Yes ☐ No, Explain

	Sources: 121.369(b)(5)	
1.2	Did the Certificate Holder adequately monitor the Control of Calibrated Tools and Test Equipment program?	☐ Yes ☐ No, Explain
1.3	Did the Certificate Holder have the appropriate inspection and calibration standards for the Control of Calibrated Tools and Test Equipment?	☐ Yes ☐ No, Explain
1.4	Was the Certificate Holder's manual for the Control of Calibrated Tools and Test Equipment program current?	☐ Yes ☐ No, Explain
1.5	Were personnel who performed inspections and calibrations of precision tools, measuring devices, and test equipment properly trained?	☐ Yes ☐ No, Explain
1.6	Was the Certificate Holder's frequency of inspections and calibration of precision tools, measuring devices, and test equipment adequate? *Related Performance JTI's:* 1. Check at the Air Carrier Operated Maintenance Facility for records that indicate that the Certificate Holder's system for continuing analysis and surveillance has provided effectiveness and corrective action to the degree and frequency of adjustment and calibration of calibrated tools and test equipment. *Sources:* 121.373(a) 2. Check at the Records Repository for records that indicate that the Certificate Holder's system for continuing analysis and surveillance has provided effectiveness and corrective action to the degree and frequency of adjustment and calibration of calibrated tools and test equipment. *Sources:* 121.373(a) 3. Check at the Air Carriers Specified Location for records that indicate that the Certificate Holder's system for continuing analysis and surveillance has provided effectiveness and corrective action to the degree and frequency of adjustment and calibration of calibrated tools and test equipment. *Sources:* 121.373(a)	☐ Yes ☐ No, Explain
1.7	Did the records (i.e., test reports, inspection/calibration reports, or certificates) provide sufficient information to verify that the measurement standards used for inspections or calibrations of precision tools, measuring devices, and test equipment were traceable (directly or indirectly) to the National Institute of Standards and Technology (NIST) or the manufacturer's standards?	☐ Yes ☐ No, Explain
1.8	Were the precision tools, measuring devices, and test equipment used for forming the basis of product acceptance or for making an airworthiness determination within the inspection or calibration intervals?	☐ Yes ☐ No, Explain
1.9	Were calibration records of precision tools, measuring devices, and test equipment that have received limited calibrations and are used for forming the basis of product acceptance or making an airworthiness determination identified as limited calibrations?	☐ Yes ☐ No, Explain ☐ Not Applicable

1.10 Were users able to determine prior to their use, that limited calibrations were performed on precision tools, measuring devices, or test equipment used for forming the basis for product acceptance or making an airworthiness determination?	☐ Yes ☐ No, Explain ☐ Not Applicable
1.11 Were in−service precision tools, measuring devices, and test equipment within the inspection and calibration intervals specified in the Certificate Holder's Control of Calibrated Tools and Test Equipment program?	☐ Yes ☐ No, Explain
1.12 If foreign−manufactured precision tools, measuring devices, and test equipment were used, were the standards for that equipment approved by the Administrator?	☐ Yes ☐ No, Explain ☐ Not Applicable
1.13 Were foreign−manufactured precision tools, measuring devices, and test equipment used for forming the basis of product acceptance or making an airworthiness determination in accordance with the Certificate Holder's manual?	☐ Yes ☐ No, Explain ☐ Not Applicable
1.14 Were in−service precision tools, measuring devices, and test equipment within the inspection and calibration specifications in accordance with the Certificate Holder's Control of Calibrated Tools and Test Equipment program?	☐ Yes ☐ No, Explain
1.15 Were the environmental conditions and controls followed during the inspection and calibration of precision tools, measuring devices, and test equipment?	☐ Yes ☐ No, Explain
1.16 Were precision tools, measuring devices, and test equipment that were recalled or removed from service, recalled or removed in accordance with the Certificate Holder's Control of Calibrated Tools and Test Equipment program?	☐ Yes ☐ No, Explain
1.17 Were equivalent precision tools, measuring devices, and test equipment used when forming the basis of product acceptance or making an airworthiness determination selected in accordance with the Certificate Holder's manual?	☐ Yes ☐ No, Explain
1.18 Did the calibration records for equivalent precision tools, measuring devices, and test equipment reveal the same calibration standards and specifications as recommended by the equipment manufacturer of the aeronautical product?	☐ Yes ☐ No, Explain ☐ Not Applicable
1.19 Were personally owned precision tools, measuring devices, and test equipment used in accordance with the Certificate Holder's manual?	☐ Yes ☐ No, Explain ☐ Not Applicable
1.20 If personally owned precision tools, measuring devices, and test equipment were authorized, did that equipment come under the Control of Calibrated Tools and Test Equipment program?	☐ Yes ☐ No, Explain ☐ Not Applicable
1.21 Were the storage, handling and transporting of precision tools, measuring devices, and test equipment performed in accordance with the Certificate Holder's program?	☐ Yes ☐ No, Explain

2	Were the Certificate Holder's policies, procedures, instructions and information, contained in its manual, for the Control of Calibrated Tools and Test Equipment program followed? *Related Performance JTI's:* 1. Check at the Air Carrier Operated Maintenance Facility that personnel authorized by the Certificate Holder conducting airworthiness inspections are following the Air Carrier's manual including instructions covering standards and limits. *Sources:* 121.135(b)(19); 121.369(b); 121.369(b)(5) 2. Check at the Geographic Location that personnel authorized by the Certificate Holder conducting airworthiness inspections are following the Air Carrier's manual including instructions covering standards and limits. *Sources:* 121.135(b)(19); 121.369(b); 121.369(b)(5) 3. Check at the Outsource Provider that personnel authorized by the Certificate Holder conducting airworthiness inspections are following the Air Carrier's manual including instructions covering standards and limits . *Sources:* 121.135(b)(19); 121.369(b); 121.369(b)(5) 4. Check at the Ramp that personnel authorized by the Certificate Holder conducting airworthiness inspections are following the Air Carrier's manual including instructions covering standards and limits. *Sources:* 121.135(b)(19); 121.369(b); 121.369(b)(5) 5. Check at the Aircraft that personnel authorized by the Certificate Holder conducting airworthiness inspections are following the Air Carrier's manual including instructions covering standards and limits. *Sources:* 121.135(b)(19); 121.369(b); 121.369(b)(5)	☐ Yes ☐ No, Explain
3	Were the Control of Calibrated Tools and Test Equipment program controls followed?	☐ Yes ☐ No, Explain
4	Did the records for the Control of Calibrated Tools and Test Equipment program comply with the instructions provided in the Certificate Holder's manual? *Related Performance JTI's:* 1. Check at the Records Repository that the records of calibration of measuring devises are kept in accordance with the air carrier's procedures. *Sources:* 121.369(b)(5) 2. Check at the Air Carrier Operated Maintenance Facility that the records of calibration of test equipment are kept in accordance with the air carrier's procedures. *Sources:* 121.369(b)(5) 3. Check at the Geographic Location that the records of calibration of test equipment are kept in accordance with the air carrier's procedures. *Sources:* 121.369(b)(5) 4. Check at the Outsource Provider that the records of calibration of test equipment are kept in accordance with the air carrier's procedures.	☐ Yes ☐ No, Explain

	Sources: 121.369(b)(5) 5. Check at the Records Repository that the records of calibration of test equipment are kept in accordance with the air carrier's procedures. *Sources:* 121.369(b)(5)	
5	Were the process measurements for the Control of Calibrated Tools and Test Equipment program effective in identifying problems or potential problems and providing corrective action for them?	☐ Yes ☐ No, Explain
6	Did personnel properly handle the associated interfaces by complying with other written policies, procedures, instructions and information that are related to this element?	☐ Yes ☐ No, Explain

EPI SECTION 1 − PERFORMANCE OBSERVABLES −Drop Down Menu
1. Personnel.
2. Tools and Equipment.
3. Technical Data.
4. Procedures, policies or instructions or information.
5. Materials.
6. Facilities.
7. Controls.
8. Process Measures.
9. Interfaces.
10. Desired Outcome.
11. Other.

EPI SECTION 2 − MANAGEMENT RESPONSIBILITY & AUTHORITY OBSERVABLES	
Objective: To determine if the person identified by the Certificate Holder having responsibility and/or authority for the Control of Calibrated Tools and Test Equipment is qualified, knowledgeable, and recognizes that responsibility and/or authority. (The person with the authority may or may not be the person with the responsibility.)	
Tasks	
To meet this objective, the inspector must accomplish the following tasks:	
1 Identify the person who has overall responsibility for the Control of Calibrated Tools and Test Equipment program.	
2 Identify the person who has overall authority for the Control of Calibrated Tools and Test Equipment program.	
NOTE: If no personnel or major program changes (as defined by the Principal Inspector) affecting the responsibility or authority attributes for this element have occurred since the last SAI and/or EPI was accomplished, then do not perform tasks 3−6 below. Answer questions 2.1 &2.2 below and provide the name/title.	
3 Review the duties and responsibilities for those who manage the Control of Calibrated Tools and Test Equipment program documented in the Certificate Holder's manual.	
4 Review the appropriate organizational chart.	
5 Discuss the Control of Calibrated Tools and Test Equipment program with the management personnel identified in Tasks 1 and 2.	
6 Evaluate the qualifications and work experience of the management personnel identified in Tasks 1 and 2.	
Questions	
To meet this objective, the inspector must answer the following questions:	
2. Are the following aspects of the Management Responsibility and Authority Attributes addressed for the Control of Calibrated Tools and Test Equipment program:	
2.1 Is there a clearly identified person who is responsible for the quality of the Control of Calibrated Tools and Test Equipment program?	☐ Yes ☐ No, Explain Name/Title:
2.2 Is there a clearly identified person who has authority to establish and modify the Certificate Holder's policies, procedures, instructions and information for the Control of Calibrated Tools and Test Equipment program?	☐ Yes ☐ No, Explain Name/Title:
2.3 Does the responsible person know that he/she has responsibility for the Control of Calibrated Tools and Test Equipment program?	☐ Yes ☐ No, Explain ☐ Not Applicable
2.4 Does the person with authority know that he/she has authority for the Control of Calibrated Tools and Test Equipment program?	☐ Yes ☐ No, Explain ☐ Not Applicable
2.5 Does the person with responsibility for the Control of Calibrated Tools and Test Equipment program meet the qualification standards?	☐ Yes ☐ No, Explain ☐ Not Applicable

2.6 Does the person with authority to establish and modify the Control of Calibrated Tools and Test Equipment program meet the qualification standards?	☐ Yes ☐ No, Explain ☐ Not Applicable
2.7 Does the person with responsibility understand the controls, process measurements and interfaces associated with the Control of Calibrated Tools and Test Equipment program?	☐ Yes ☐ No, Explain ☐ Not Applicable
2.8 Does the person with authority understand the controls, process measurements and interfaces associated with the Control of Calibrated Tools and Test Equipment program?	☐ Yes ☐ No, Explain ☐ Not Applicable
2.9 Does the responsible person know who has authority to establish and modify the Control of Calibrated Tools and Test Equipment program?	☐ Yes ☐ No, Explain ☐ Not Applicable
2.10 Does the individual with authority know who has the responsibility for the Control of Calibrated Tools and Test Equipment program?	☐ Yes ☐ No, Explain ☐ Not Applicable

EPI SECTION 2 − MANAGEMENT RESPONSIBILITY & AUTHORITY OBSERVABLES −Drop Down Menu
1. Assignment of responsibility.
2. Assignment of authority.
3. Does not understand procedures, policies or instructions and information.
4. Does not understand controls.
5. Does not understand process measurements.
6. Does not understand interfaces.
7. Span of control.
8. Position vacant.
9. Other.